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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,996	07/08/2003	Donna M. Hale	706315US1	8173
24938	7590	12/22/2004	EXAMINER	
DAIMLERCHRYSLER INTELLECTUAL CAPITAL CORPORATION			WILSON, KATINA M	
CIMS 483-02-19			ART UNIT	
800 CHRYSLER DR EAST			PAPER NUMBER	
AUBURN HILLS, MI 48326-2757			2856	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,996	Applicant(s) HALE ETAL	
	Examiner Katina M Wilson	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 4 and 12-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Claims 3 and 11 are objected to because of the following informalities: the claim recites "a reflective material chosen from metal and epoxy" however in the specification recites "a reflective material such as epoxy or metal" (page 4, lines 7). Appropriate correction is required.

Claim Objections

Claim 8 is objected to because of the following informalities: misspelled "traveling" line 7. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

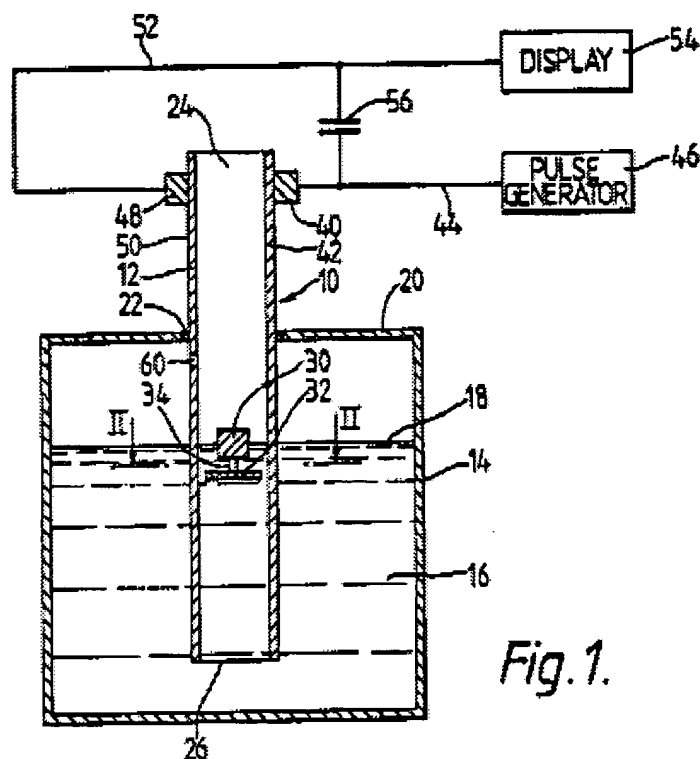
Claim 1, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie (GB 2152667A).

As to claims 1, 8, 20, Gillespie teaches an ultrasonic liquid level gauge 10 within a liquid storage tank having a float 30 attached to a plane reflecting surface 32 located in the gauge. The gauge includes a transducer 40, which transmits signals and a receiver 48, which receives the return signals. The signal analyzer and display 54 receives signals and based off the time interval between these signals the distance is determined and displayed. (page 2, lines 1-15; figure 1)

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Gillespie does not clearly state "an interface circuit connected to said transducer and arranged to *measure an elapsed time* between transmission" but it is obvious to one skilled in the art at the time of the invention that if the location of the transducer is known and the distance is determined, then the elapsed time between transmission is known. One would be able to modify an equation to give the elapsed time between transmission based off the location of the float, transducer and the receiver.

Gillespie does not state the liquid is fuel in the storage tank, but states the liquid level gauge can be used in almost any liquid without adjustment to the invention (page 1, lines 34-35).

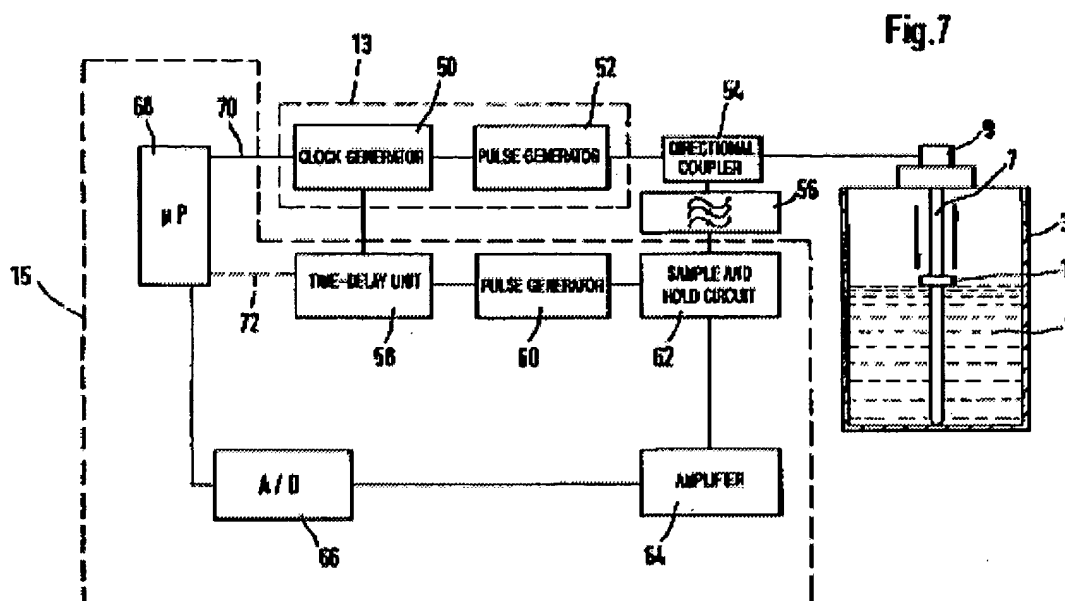
*Fig. 1.*

Claims 2-3, 5-7 and 9-11, 16-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie in view of Lutke et al 6229476.

As to claims 2, 3, 10-11 and 21, Gillespie does not teach the shape of the reflective portion to be concave. However, Lutke et al teaches a reflective segment 29 (thin metal coating) being integral to a float 11 (varying in shape). It would be obvious to one skilled in the art at the time the invention was made that the reflective segment would take on the shape of the float if the segment integral to the float. The shape of the float is not novel other references are cited to show various float shape.

As to claims 5-7 and 16-19, Gillespie does not clearly state the signal analyzer and display give an output comprises a resistance, a current, a voltage, and/or network message, but gives a brief description of circuitry between the signal analyzer and display 54 and pulse generator 46. Nevertheless, it would have been obvious to one skilled in the art at the time of the invention was made to adjust/modify the signal analyzer to ascertain an output of current level, a current reading, voltage reading, or resistance reading.

As to claim 9, Lutke et al teaches conductor 7, which projects into the container 3 (centering rod) is parallel to the axis (transmission signal axis) having an upper and lower end. The upper is fixed to the top surface and in a spaced relation to a transmitter transducer. The lower end is located at the bottom of the surface and the float is in sliding engagement with the conductor 7.



Allowable Subject Matter

Claims 4, 12-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

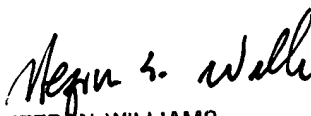
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katina M Wilson whose telephone number is 571-272-2209. The examiner can normally be reached on Mon-Fri 6:15am-2:00pm, off on Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E Williams can be reached on 571-272-2209. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

KW


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800